## California Environmental Protection Agency Pair Resources Board

## **KOMATSU LIMITED**

EXECUTIVE ORDER U-R-005-0448

New Off-Road

Compression-Ignition Engines

Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-14-012;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engine and emission control system produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (liters)	ELIEL TYPE			
2018	JKLXL30.5GDC	30.48	Diesel	8000		
SPECIA	AL FEATURES & EMISSION	N CONTROL SYSTEMS	TYPICAL EQUIPMENT APPLICATION			
Cha	Electronic Direct Injection arge Air Cooler, Exhaust el Oxidation Catalyst, Per and Engine Contro	Gas Recirculation, iodic Trap Oxidizer,	Loaders			

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for non-methane hydrocarbon (NMHC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kw-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
POWER CLASS			NMHC	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK
kW > 560	Tier 4 Final	STD	0.19	3.5	N/A	3.5	0.04	N/A	N/A	N/A
		CERT	0.02	2.9		0.00	0.003			

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

Executed at El Monte, California on this

day of September 2017.

Annette Hebert, Chief

Emissions Compliance, Automotive Regulations and Science Division

Attachment //

## **Engine Model Summary Template**

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				4.Fuel Rate:	5.Fuel Rate:		7.Fuel Rate:	9 Firel Date:	0.5 1 1 1 0 1 1
			3.BHP@RPM	mm/stroke @ peak HP	(lbs/hr) @ peak HP	6. Forque @ RPM			9. Emission Control
Engine Family	1.Engine Code	2.Engine Model	(SAE Gross)	(for diesel only)	(for diesels only)	(SEA Gross)	torque	(lbs/hr)@peak torque	Device Per SAE J1930
JKLXL30.5GDC	5C02	SAA12V140E-7	1065@1800	298	363	3371@1350	321	292	EM,TC, CAC,EGR,ECM,PTOX, CO., DOC